

Date: Tuesday, 29/04/2008 10:57:19 AM  
 User: Melanie Fauteux

## Process Sheet

OK

Customer	: CC-DAR01 Dart Aerospace Ltd.		Drawing Name	: TUBE	
Job Number	: 38884		Part Number	: D37693	
Estimate Number	: 10804		Drawing Number	: PROTOTYPE	
P.O. Number	:		Project Number	:	
This Issue	: 29/04/2008	S.O. No. :	Drawing Revision	: A	
Prsh't Rev.	: NC		Material	:	
First Issue	: / /	Type : R & D SM/MED FAB	Due Date	: 16/05/2008 Qty: 4 Um: Each	
Previous Run	: 38880				
Written By	:				
Checked & Approved By	:				
Comment	:				

## Additional Product

PROTOTYPE

Job Number:		
Seq. #:	Machine Or Operation:	Description :
1.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
		
Comment: SMALL & MEDIUM FAB RESOURCE 1		
MAKE PER DRWG D3769 REV A		
2.0	M6061T6T1000W065	6061T6 TUBE m107950 FF 08-05-22
		
Comment: Qty.: 1.3200 f(s)/Unit Total : 5.2800 f(s) m106734 x2 ml08/05/09		
3.0	6061T6 TUBE	INSPECT WORK TO CURRENT STEP ENGINEERING APPROVAL
		
Comment: INSPECT WORK TO CURRENT STEP 10/08/09 08/05/09 (4)		
4.0	HAND FINISHING1	HAND FINISHING RESOURCE #1 S 08/05/22
		
Comment: HAND FINISHING RESOURCE #1 20/F/08/05/12 (4)		
5.0	ACID ETCH AND ALODINE PER QSI.005	INSPECT POWDER COAT/ CHEMICAL CONVERSION
		
Comment: INSPECT POWDER COAT/ CHEMICAL CONVERSION 10/08/12 (6)		

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## Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: TUBE

Job Number: 38884

Part Number: D37693

Job Number:



Seq. #:	Machine Or Operation:	Description :
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6.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

GIVE TO CHRIS P-ENG

FOR ENGINEERING USE ONLY

Pat 01.05.29

CHARGE TO JOB #00196

7.0	QC21	FINAL INSPECTION/W/O RELEASE
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(4)

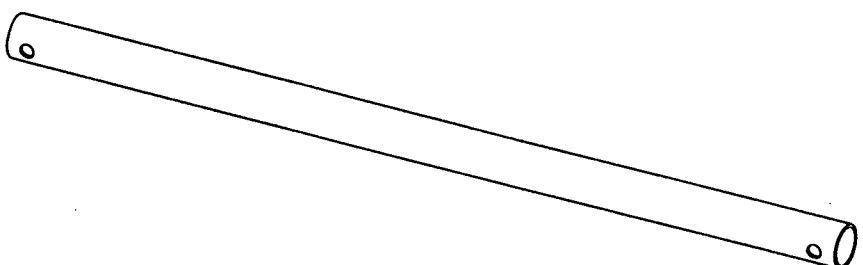
Comment: FINAL INSPECTION/W/O RELEASE

A080529 Prototype

Job Completion



U 8/06/11



**69-3 TUBE**

**D3769-5 TUBE**

**PROTOTYPE**  
PLEASE RETURN ALL ISSUED  
DATA TO ENGINEERING

*GP 08.04.23*

SPEC. M6061T6T1.000W.065)

REV.	DESCRIPTION		BY	DATE
DESIGN	HS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN	HS			
CHECKED		DRAWING NO.		REV.
MFG. APPR.		D3769		SHEET 1 OF
APPROVED		TITLE	SCA	
DE APPR.		TUBE		N
DATE	08.03.26	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

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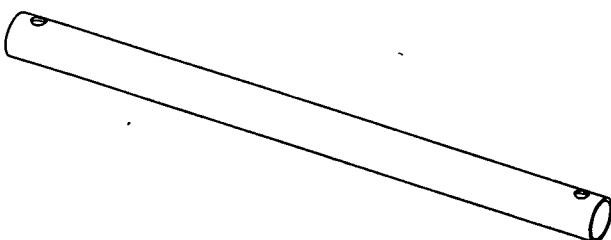
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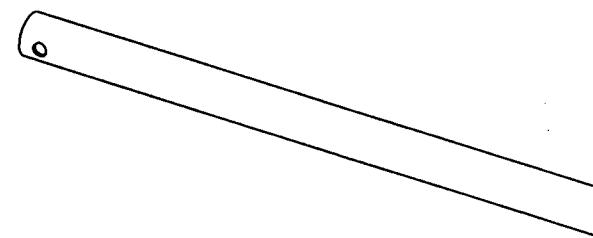
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D

C



D3769-1 TUBE



D3769-3 TUBE

NOTES:

- 1) MATERIAL: 6061-T6 (QQ-A-200/8 OR QQ-A-225/8) ALUMINUM TUBING 1.00" X 0.065" WALL (REF. DART SPEC. M6061T6T1.00C)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D3769-1, 0.27 lbs  
D3769-3, 0.28 lbs  
D3769-5, 0.37 lbs

# Receiving Report

Date: 08/01/08

Batch No: M106734

Supplier: Marmon Keystone Dart P/O: 5373

Packing Slip: Yes  No   
 Invoice: Yes  No   
 Receipt: Cash: Cr:

Release Note Attached: Yes  No  N/A   
 Waybill Attached: Yes  No   
 Shipment Complete: Yes  No  N/A   
 QC6 Inspection:  08/01/08 N/A   
 Work Order:  N/A

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 CJ

## Production/Admin:

Date: 08/01/08

Received/Costing: RIV 0668

Initial: CJ

Location: \_\_\_\_\_

FORMS\Purchasing\Approved Purch\RECREPORT R'D

Energy Surcharge

12.20

ORIGINAL INVOICE / FACTURE ORIGINALE

TERMS: NET 30 DAYS  
PLUS 2% PER MONTH ON  
ALL OVERDUE ACCOUNTS.

TERMES: NET 30 JOURS  
PLUS 2% PAR MOIS  
SUR COMPTE PASSÉ Dû.

FOR CONDITIONS OF SALE REFER TO BACK OF INVOICE.  
POUR LES CONDITIONS DE VENTE, VOUS TROUVEREZ LES  
RENSEIGNEMENTS À L'ENDOS DE LA FACTURE ORIGINALE.

G.S.T. /HST	2.95
PROVINCIAL TAX TAXE PROVINCIALE	.00

02/06/2008

PAYMENT OF THIS INVOICE IS DUE BY  
LE RÈGLEMENT DE CETTE FACTURE EST EXIGIBLE AU PLUS TARD LE

61.91

**KAISER CHANDLER****CERTIFICATION and PHYSICAL TEST RESULTS**

OP 026A

These results are for

Mill Number .....

MARMON/KEYSTONE CORP

175-48862.

Purchase Order No 60-29318-002

Alloy .....

6061 Temper..... T6

Part No, Item No, Commodity No or Inventory No

Size Description.

1.00 IN OD X .065 IN WALL

Specification(s).

WW-T-700/6F ASTM B210-04 AMS 4082N

Additional procedures as called for on Specification:

WE TAKE EXCEPTION TO PARA. 5.2.1. Per AMS 4082N, WAS NOT OILED.

**CHANDLER PLANT**  
**BOX 5011 6573 W WILLIS ROAD**  
**CHANDLER AZ 85226**  
**PH: 520.788.1007**  
**FAX: 520.788.0596**  
**SALES: 800.538.8274**

Limits	Chemical Composition			Per Aluminum Standards and Data 2003							
MIN	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others	Al
0.40	0.7	0.40	0.15	—	0.8	0.04	—	—	—	Ea 0.05	Remainder
MAX	0.8	0.7	0.40	0.15	1.2	0.35	—	0.25	0.15	Total 0.15	
Actuals	0.63	0.29	0.22	0.03	0.96	0.06	—	0.03	0.01	Each 0.05	Remainder
										Total 0.15	

\*For WW-T-700/6 specification, maximum Si plus Fe is .45%.

\*\* 1100 Alloy Max Si + Fe is 0.95 %

Mechanical Properties				
Lot #	Temp	Yield PSI	Ultimate PSI	Elongation %
48862 A\T6		42,800	46,600	15
48862 B\T6		42,700	46,400	15

**Domestic Melt Source Made in USA**

We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description; and that samples representative of the material met the composition limits and had the mechanical properties as indicated.

Date 05/19/2007

*Wilfredo A. dela Cruz*Wilfredo A. delaCruz  
Sr. Metallurgical Engineer

CartAct

AT 1.065 734

06/05/2007 FROM: MARMON/KEYSTONE  
C.P.O.: BN4984  
M/R OR: C PART:  
INIT.:  
TO:  
OR.REFE:  
SLSPRS:

# Receiving Report

Date: 8/5/08

Batch No: M107950

Supplier: MARIN

Dart P/O: 6269

Packing Slip: Yes  No   
 Invoice: Yes  No   
 Receipt: Cash  Cr

Release Note Attached: Yes  No  N/A   
 Waybill Attached: Yes  No  N/A   
 Shipment Complete: Yes  No  N/A   
 QC6 Inspection: OK  N/A   
 Work Order: OK  N/A

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 CL

Production/Admin:

Date 08/05/08  
 Received/Costing R(R,7822  
 Initial CL

Location \_\_\_\_\_

H:\FORMS\Purchasing\approved purch\RECREPORT Rev D

RECEIVED MAY 09 2008

Energy Surcharge

12.20

ORIGINAL INVOICE / FACTURE ORIGINALE

TERMINÉ LE 09 MAI  
 2008 POUR MOUNTAIN  
 EQUIPMENT CO-OP INC.

TERMÉ LE 09 MAI 2008  
 POUR MOUNTAIN  
 EQUIPMENT CO-OP INC.

FOR CONDITIONS OF SALE REFER TO BACK OF INVOICE.  
 POUR LES CONDITIONS DE VENTE, VOUS TROUVEREZ LES  
 RENSEIGNEMENTS A L'ENDOS DE LA FACTURE ORIGINALE.

G.S.T.	/HST	18.02
T.P.S.		
PROVINCIAL TAX TAXE PROVINCIALE		.00

THE PAYMENT OF THIS INVOICE IS DUE BY  
 LE PAYEREMENT DE CETTE FACTURE EST EXIGIBLE AU PLUS TARD LE

06/04/2008

378.38

FEB 18 2008 15:44 FR MARMON KEYSTONE

6309722464 TO 14506414357

P.02/03

02/18/2008 From: MARMON/KEYSTONE  
 M/K OR:  
 C.P.O.:  
 C PART:

INIT.: *B*To:  
OR. REF:  
SLSPRS:

KAISER ALUMINUM  
 FABRICATED PRODUCTS  
 6573 W. WILLIS ROAD  
 CHANDLER, AZ 85226

**CERTIFIED TEST REPORT**  
<http://www.KaiserAluminum.com>

CUSTOMER PO NUMBER:		CUSTOMER PART NUMBER:		PRODUCT DESCRIPTION:			
80-33503		AT/1..065/734		Seamless Tube			
KAISER ORDER NUMBER:	LINE ITEM:		SHIP DATE:	KAISER LOT NUMBER:	ALLOY:	TEMPER:	
200438	005		11/27/2007	F00000606	6061	T6	
WEIGHT SHIPPED:	QUANTITY:		BL NUMBER:	DIAM/ID/OD/THKNS:	WEIGHT:	LENGTH:	
331.000 LB	123.000 PCS		200274			12.000 FT	
SHIP TO:				SOLD TO:			
MARMON/KEYSTONE CORP 10700 MARMON DR BOLINGBROOK, IL 60440 USA				MARMON/KEYSTONE CORP 10700 MARMON DR BOLINGBROOK, IL 60440 USA			

**Actual Physical Properties**

REFERENCE	DIA IN	SAMPLE	UTS (ksi)	TTS (ksi)	ELONG%	HARDNESS	COEFFICIOS	RECD
F00000606	0001	1	46.5	42.6	17.0	N/A	N/A	N/A

**Chemical Composition (wt%), Aluminum Remainder**

LIMITS	Si	Fe	Cu	Mn	Ng	Cr	Zn	Ti	Pb	Bi	Zr	Re	Tot
Maximum	0.80	0.70	0.40	0.15	2.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
R22453	.62	.39	.22	.05	.92	.06	.03	.02	.00	.01	.00	.00	.00

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Wilfredo A. de la Cruz, Sr. Metallurgical Engineer

*Wilfredo A. de la Cruz*

Page 1 of 2

Plant Serial: 00000264

Kaiser Order Number: 200438

Line Item: 005

Q.C. REVIEWED

PAGE. 02

FEB 06 2008 13:10

AT 1..065 734

18 2008 15:44 FR MARMON KEYSTONE  
18/2008 From: MARMON/KEYSTONE

6309722464 TO 14506414357

X OR:  
C.P.O.:  
C PART:

INIT.:

To:

OR. REF:  
SLSPRS:

# KAISER ALUMINUM FABRICATED PRODUCTS

KAISER ALUMINUM  
FABRICATED PRODUCTS  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

*Brett*

CERTIFIED TEST REPORT  
<http://www.KaiserAluminum.com>

### Applicable Requirements:

Description: OD: 1.000"; Wall: 0.065"; Round #  
AMS-4082N ASTM-B210-04 WW-T-700/6F  
WE TAKE EXCEPTION TO PARA. 5.2.1. PER AMS 4082N, WAS NOT OILED.  
THE FOLLOWING SPECIFICATION HAVE BEEN MADE INACTIVE OR  
CANCELLED: MIL-T-7081, WW-T-700E/GEN, WW-T-700/2E, WW-T-700/3E,  
WW-T-700/4F, WW-T-700/5E, WW-T-700/6F, WW-T-700/7E.  
COMPLIES TO THE REQUIREMENTS OF DIN EN 10204 JAN 2005  
COMPLIES TO DIN EN 10204 JAN 2005

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's Sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general sales conditions of sale. Test reports are on file subject to examination.

Wilfredo A. delaCruz, Sr. Metallurgical Engineer

*Wilfredo A. delaCruz*

Page 2 of 2

Plant Serial: 00000264

Kaiser Order Number: 200436

Line Item: 005

PAGE.03

FEB 06 2008 13:11

\*\* TOTAL PAGE.03 \*\*

8 7 6 5 4 3 2 1

D

D

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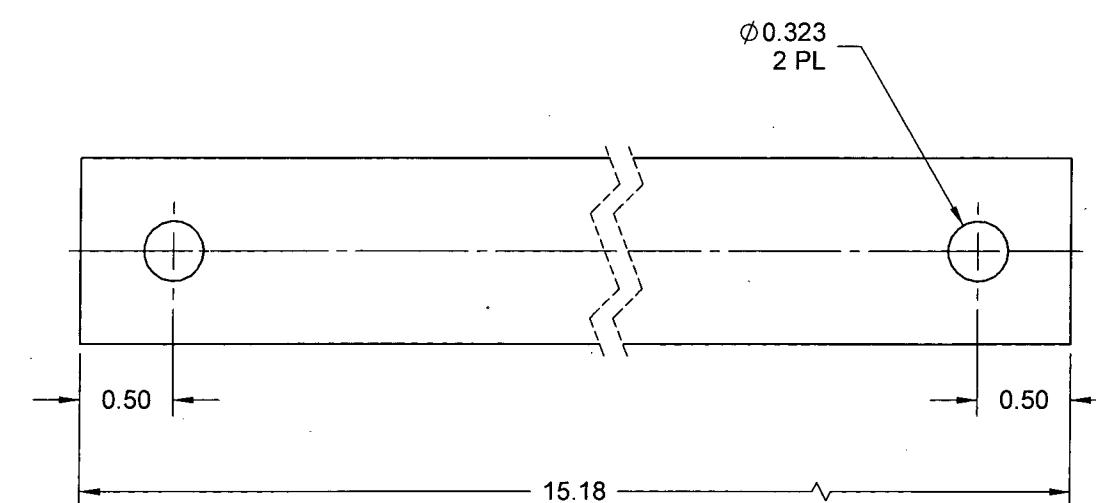
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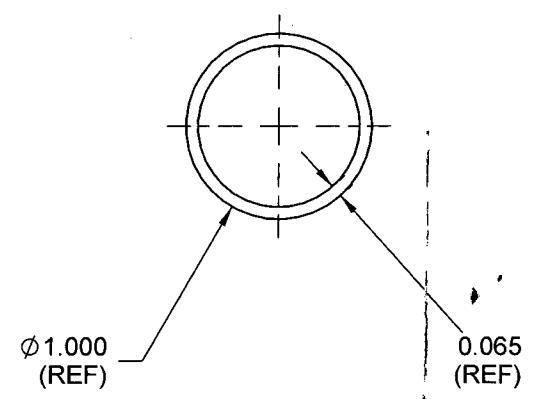
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D3769-3 TUBE



**PROTOTYPE**  
PLEASE RETURN ALL ISSUED  
DATA TO ENGINEERING

GP 08.04.23

DESIGN	HS	DART AEROSPACE LTD	
DRAWN	HS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	
MFG. APPR.		REV. A	
APPROVED		D3769	
DE APPR.		SHEET 3 OF 4	
DATE	08.03.26	TITLE	SCALE
		TUBE	1:1

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